The Collaboration Problem In Minecraft

In standard Minecraft gameplay, each player sees only their own first-person view. This creates several collaboration challenges:

- Lack of situational awareness
- Over-reliance on verbal descriptions
- Slower coordination during joint activities (e.g., building, exploring, fighting mobs)

"Wait, where are you?" becomes a frequent and disruptive question during play.

SPLIT SCREENS

Switch POVs + edit how many screens is on display

Username displayed on top of each POV

Up to four screens or less

EaterNation

Iloveminecraft123

MrLean

Matchamonster

Collaborative Minecraft Split-Screen

Our system is a split-screen plugin for Minecraft that enables players to view up to four live perspectives on one display.

This design supports real-time group awareness and social translucence, letting users:
- See what teammates are doing
- Coordinate movement and actions faster
- Avoid relying solely on verbal descriptions

Each window displays:
- A player's live point of view
- Their username label at the top-left corner

In our survey, 40% of players said they often didn't know what others were doing during collaboration.

Designed for both gameplay enhancement and studying collaborative behavior in multiplayer settings.

Visual Version Control

This helps players stay organized, prevent loss, and recover from mistakes.

60% of our respondents said they've lost progress or needed to roll back a world.
40% don't manage world versions at all.

A visual version control panel that:
- Shows side-by-side snapshots of world edits
- Labels who changed what and when
- Allows quick one-click restore to a previous version

Applies CSCW concepts like Accountability and Articulation Work.

Live Minimap

This helps players users coordinate actions, locate each other, and stay oriented in large worlds.

73.3% of players said a live minimap would be helpful in team projects. Players want better awareness of where teammates are and what they're doing.

A live minimap shows:
- Teammate locations in real time
- Color labels for player and direction facing
- Optional activity icons (building, mining, death)

Applies CSCW concepts like Awareness and Shared Context.

COMMUNICATION
UPGRADES

These help reduce confusion, increase group awareness, and improve teamwork without relying on third-party tools.

Over 50% of players reported issues with missed instructions or poor communication.

A built-in communication system that includes:
- Proximity-based voice chat
- Scroll-wheel emoji menu for quick expression
- Custom status (e.g., "AFK", "Mining", "Fighting")
- Message pinning or alerts to prevent lost text

Applies CSCW concepts like Communication Support and Awareness and Soical Translucence.

🎤 TALK   EMOTE   STATUS   ALERT

🔊 Base under attack

EnderNation
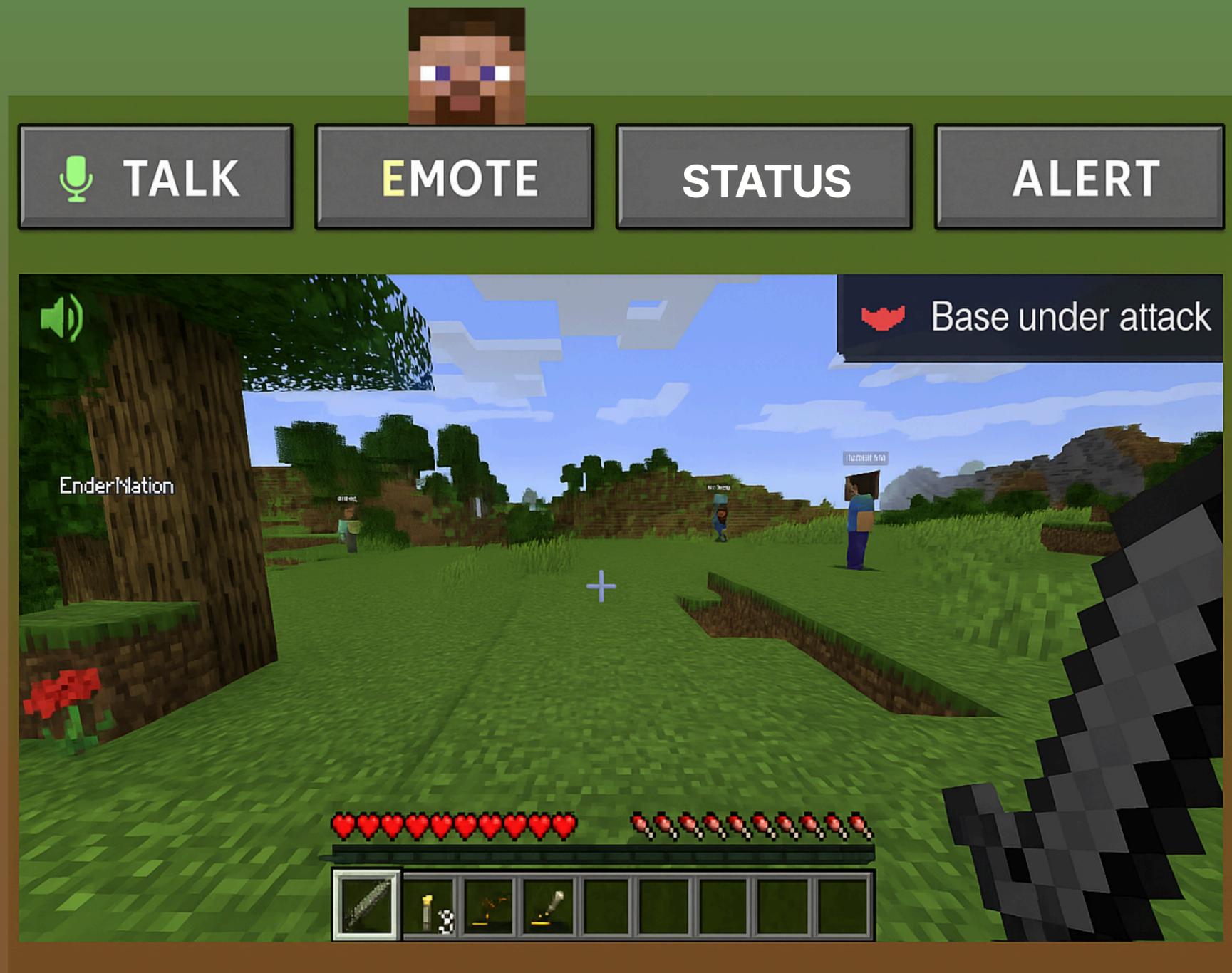
CSCW Concepts

1. Workspace Awareness (Gutwin & Greenberg, 2002)

Understanding who is doing what, where, and with which objects in a shared space.

In our system: Username labels + real-time POVs let players see what teammates are building, fighting, or exploring
—no need to ask.

2. Social Translucence (Erickson & Kellogg, 2000)

Making meaningful social cues visible supports collaboration and accountability.

In our system: Each POV is "on display," encouraging visible effort, teamwork, and smoother help-seeking.

3. Coordination Mechanisms (Schmidt & Simonee, 1996)

Tools and conventions that support the timing and ordering of interdependent activities.

In our system: Shared visual feedback acts as a coordination artifact—players can time actions together (e.g., entering combat or placing blocks).

THANK YOU

Quit

Restart